Quality Grand Rounds: The Case for Patient Safety

In this issue, we present the 13th and final article in the Quality Grand Rounds series, the case of an elderly woman admitted to a teaching hospital early in the academic year with a mild episode of acute pancreatitis (1). Despite initial improvement, her condition deteriorated over the course of several days; her ultimate death was attributable to delayed diagnosis and management of a small-bowel obstruction. The case highlights problems in resident supervision, fumbled handoffs, adverse consequences of housestaff duty-hour limitations, and deficient safety systems. As with many cases of medical errors, the explanation is messy and multifaceted, resisting a clean, simple fix.

The case stands as a fitting bookend to the entire Quality Grand Rounds series. Our first case, “The Wrong Patient,” described a woman who received an invasive electrophysiology procedure intended for a patient with a similar last name (2). In their discussion of that case, Chassin and Becher identified 17 individual mistakes, none remarkable or difficult to understand in isolation. Together, they provided the necessary ingredients for a breathtaking error.

In between, we have published 11 other cases that illustrate the breadth of the patient safety field (3–13). Some cases—a patient dies after a nurse mistakenly flushes an intravenous line with insulin instead of heparin, another dies of an air embolism after incorrect removal of a central catheter—beg for such “systems fixes” as computerized physician order entry, bar coding, checklists, readbacks, and competency-based credentialing (3, 10). Other cases—a patient dies after a nurse mistakenly flushes an intravenous line with insulin instead of heparin, another dies of an air embolism after incorrect removal of a central catheter—beg for such “systems fixes” as computerized physician order entry, bar coding, checklists, readbacks, and competency-based credentialing (3, 10). Other cases—a patient’s “hospitalization from hell,” for example (6)—demonstrate that safe systems need to be accompanied by an institutional culture that prizes safety and quality.

In fact, 7 years after the Institute of Medicine’s report To Err Is Human catalyzed the modern patient safety movement (14), we have come to recognize that the solutions to medical errors must be as distinct as the problems themselves. It is no longer sufficient for researchers to simply demonstrate that a targeted intervention (for example, computerized physician order entry, teamwork training, higher nurse-to-patient ratios, or housestaff duty-hour limits) leads to improved safety. To be useful to decision makers in a specific institution, studies should help them to choose among the many potentially effective interventions in the face of limited resources, the quirks of a specific clinical environment, and a finite institutional capacity for change. Efforts to use evidence to help inform these prioritization decisions are in their infancy (15).

In addition to the challenge of helping institutions to choose among several effective safety interventions, the safety field has begun to appreciate the frequency of unintended consequences of safety interventions. Both the case in this issue and our penultimate case (in which a barcoded wristband identification system backfired when 2 patients’ wristbands got mixed up [13]) demonstrate that even “easy” fixes like housestaff duty-hour limitations and bar coding may cause unforeseen problems as they migrate from theory to widespread application. Several recent articles describing the negative consequences of computerized physician order entry amplify the same theme (16–18).

As the patient safety field matures, these unanticipated effects should no longer surprise us. Initial studies are often conducted by investigators who are passionate about a given practice, take place in relatively controlled settings, and have unusually robust funding and experienced support personnel (19). Although subsequent, more real-world studies with negative findings are often critiqued as simply illustrating “problems with implementation” (20), they may more accurately reflect the efficacy of the practices under natural conditions. Accordingly, we ignore them at our own, and our patients’, peril. As Shojania and colleagues point out, the solution to these unforeseen consequences is not to eschew innovation out of fear of the problems it may bring (1). Rather, it is to take promising technologies and practices, often drawn from other industries, and adapt them to the health care setting, maintaining vigilance to identify these problems if they exist (21).

Even as the cases in the Quality Grand Rounds series illustrated the range and complexity of medical errors, we aimed for them to be a “play within a play,” demonstrating the unique power and drama of the case presentation as a patient safety teaching tool. Although one can readily comprehend the value of quality measurement for simple processes with demonstrated beneficial outcomes (such as the use of aspirin or β-blockers in patients with acute myocardial infarction), no measurement system can capture the richness and nuance of a complex case of medical error. For example, even a relatively detailed chart review of the case discussed by Shojania and colleagues might have revealed an elderly patient who died after being admitted to the hospital for pancreatitis. Furthermore, because the patient did not want heroic measures, her death was peaceful and, for all but a clinically sophisticated reviewer, not entirely unexpected. Yet the analysis of the case demonstrates myriad errors and opportunities for improvement, with a drama and narrative drive that a blackboard full of failure mode and effects analyses (FMEAs) could not possibly match. Such cases—and their powerful messages—will come to light only if clinicians feel comfortable bringing them forward. We hope that the series has illustrated the importance of providing safe venues for open, honest discussions of medical errors. (Parenthetically, in several years of publishing anonymous cases of medical errors in Annals, in a popular book [22], and in a federally sponsored Web-based journal [AHRQ WebMeM], we have not had a single uncomfortable inquiry from a journalist or an attorney. We believe that concerns about legal discovery of case dis-
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Discussions in public venues are often overblown. The recently passed patient safety legislation (which calls for federally sanctioned Patient Safety Organizations that will protect storytelling and data sharing from legal discovery [23]) represents a positive step in the effort to facilitate unencumbered discussions of medical errors.

We end the series with profound thanks to the many physicians, nurses, pharmacists, administrators, and patients who shared their stories with us in the hope that doing so might prevent another error. We are grateful to Annals for hosting the Quality Grand Rounds series and to the California HealthCare Foundation for its generous support. Although the series has concluded, we plan to publish a book containing the cases and additional commentary, which may serve as an ongoing resource for the field. We hope that the cases have not only been useful for their specific content but also that they have encouraged institutions and providers to share their own cases in a new way, using them to sow the seeds of systems and culture changes to ensure that patients receive safe, high-quality care.

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